

Inventor: Lawrence J. Seigel
Title: "METHOD AND SYSTEM FOR EVALUATING THE EFFICIENCY
OF AN AIR CONDITIONING APPARATUS"
Serial No.: 10/034,785
Docket No.: 03237.0001U2
Filing Date: December 27, 2001
Contact: Lawrence D. Maxwell, Esq. (404) 688-0770

Sheet 1 of 27

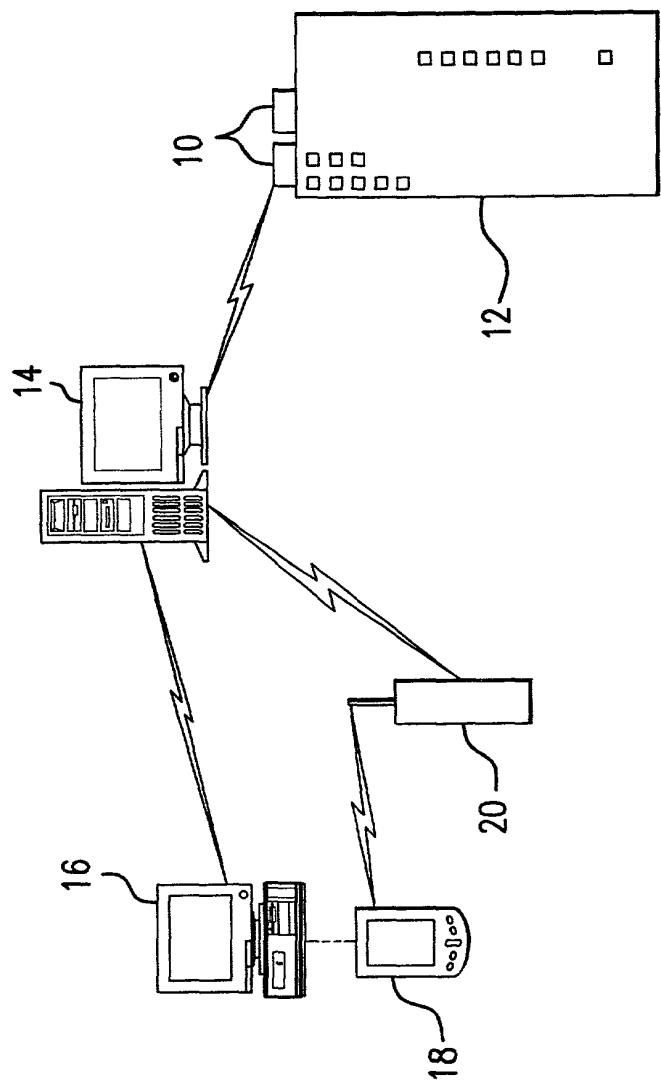


FIG.1

10034785.062402

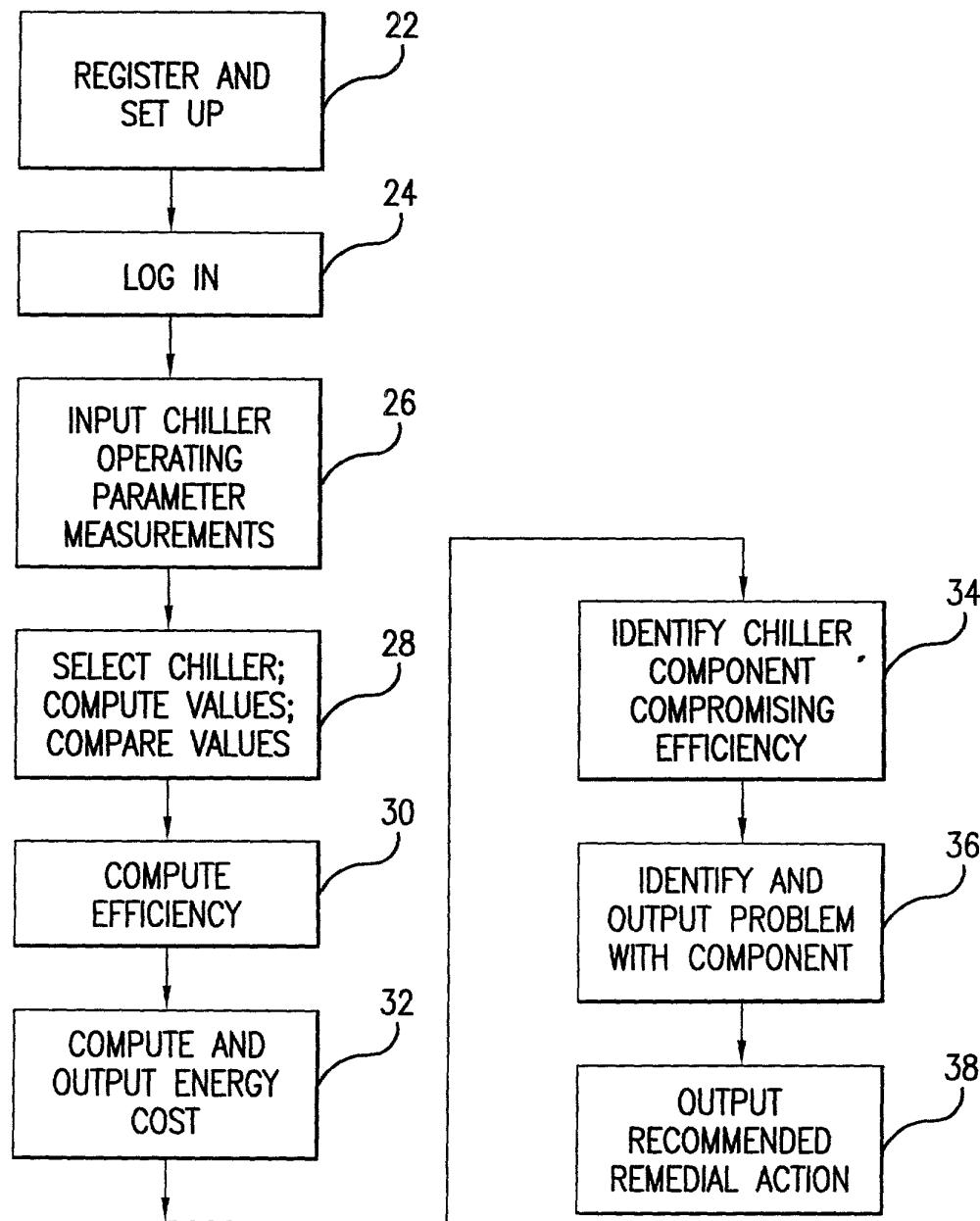


FIG.2

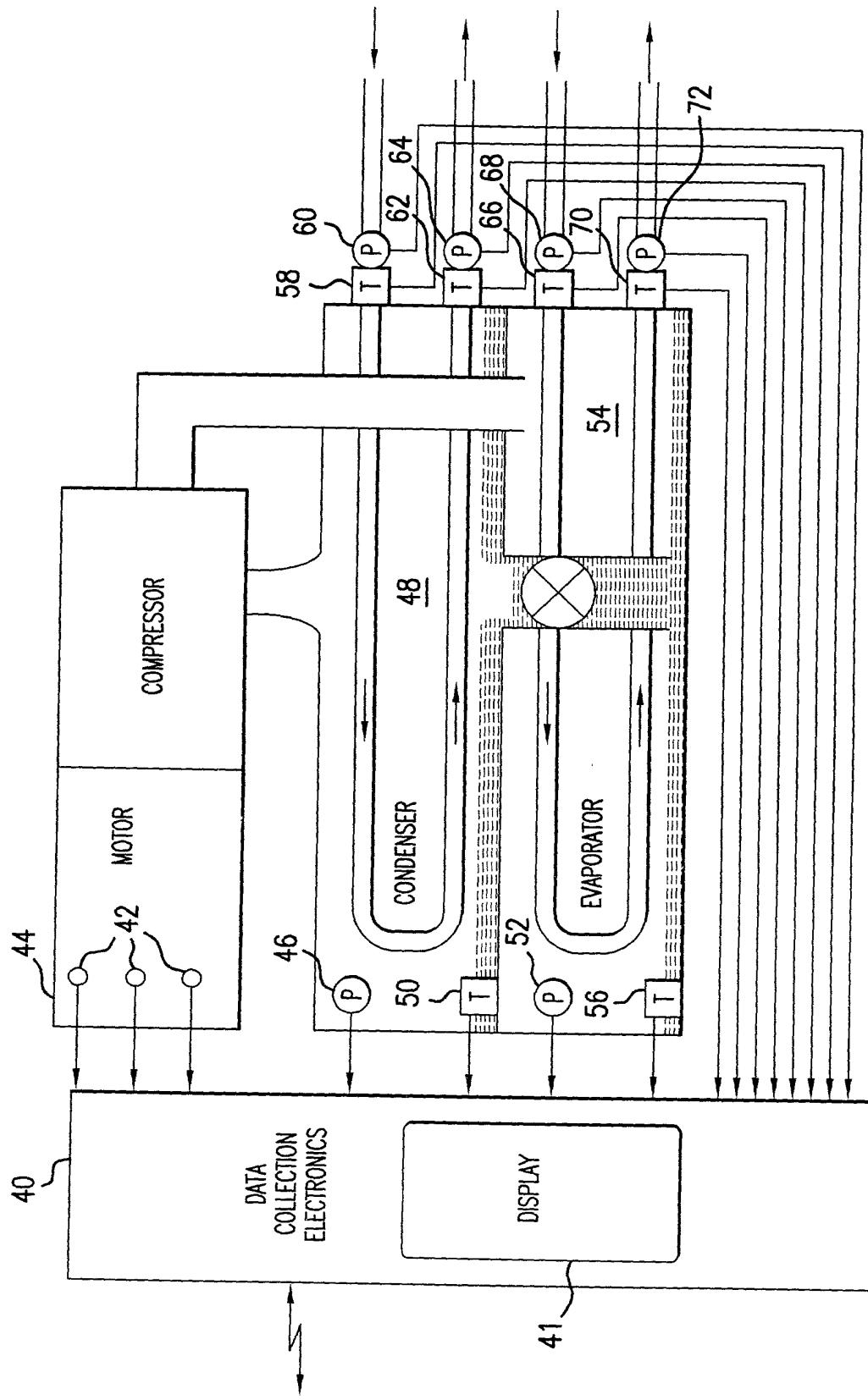


FIG. 3

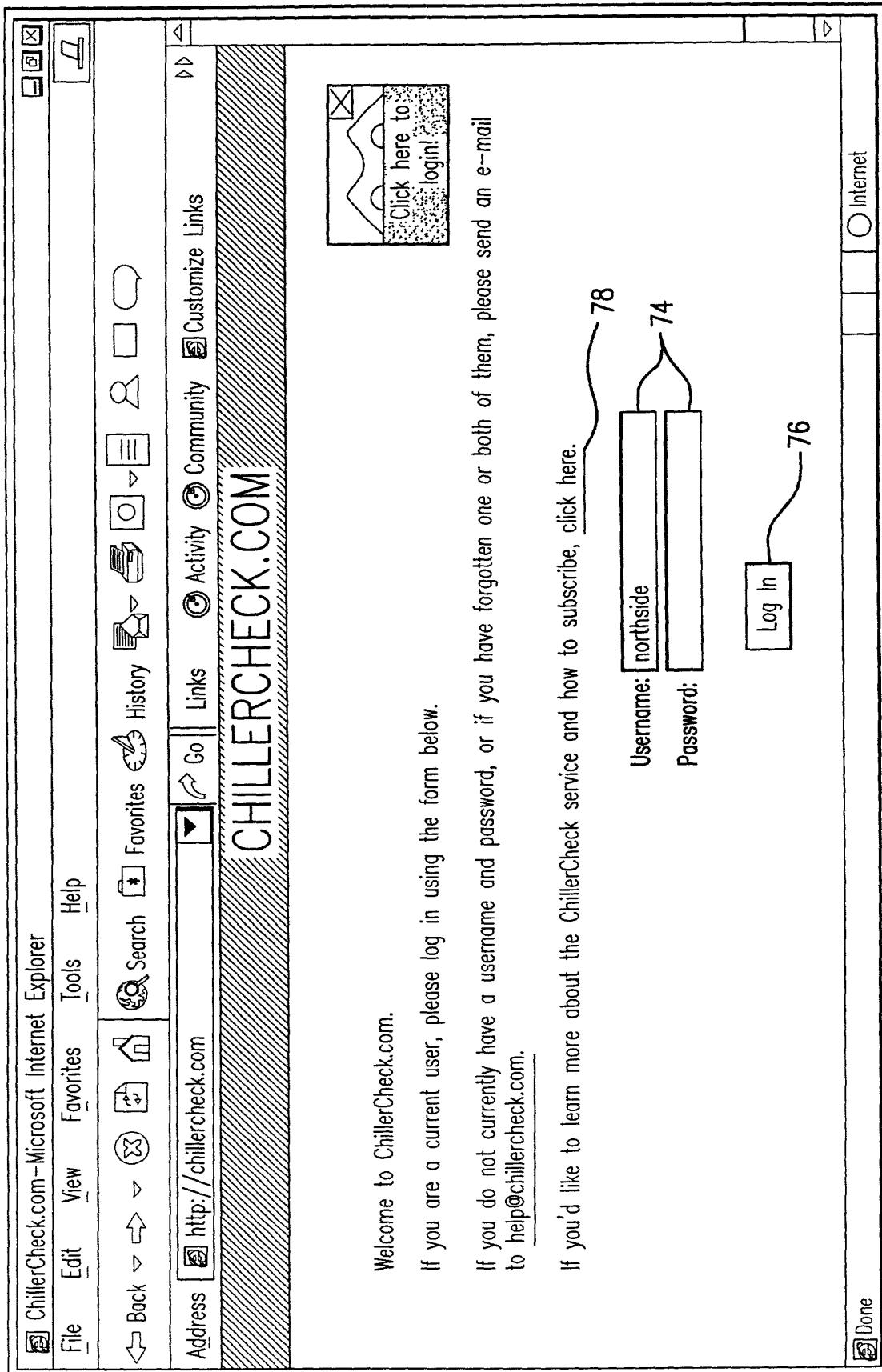
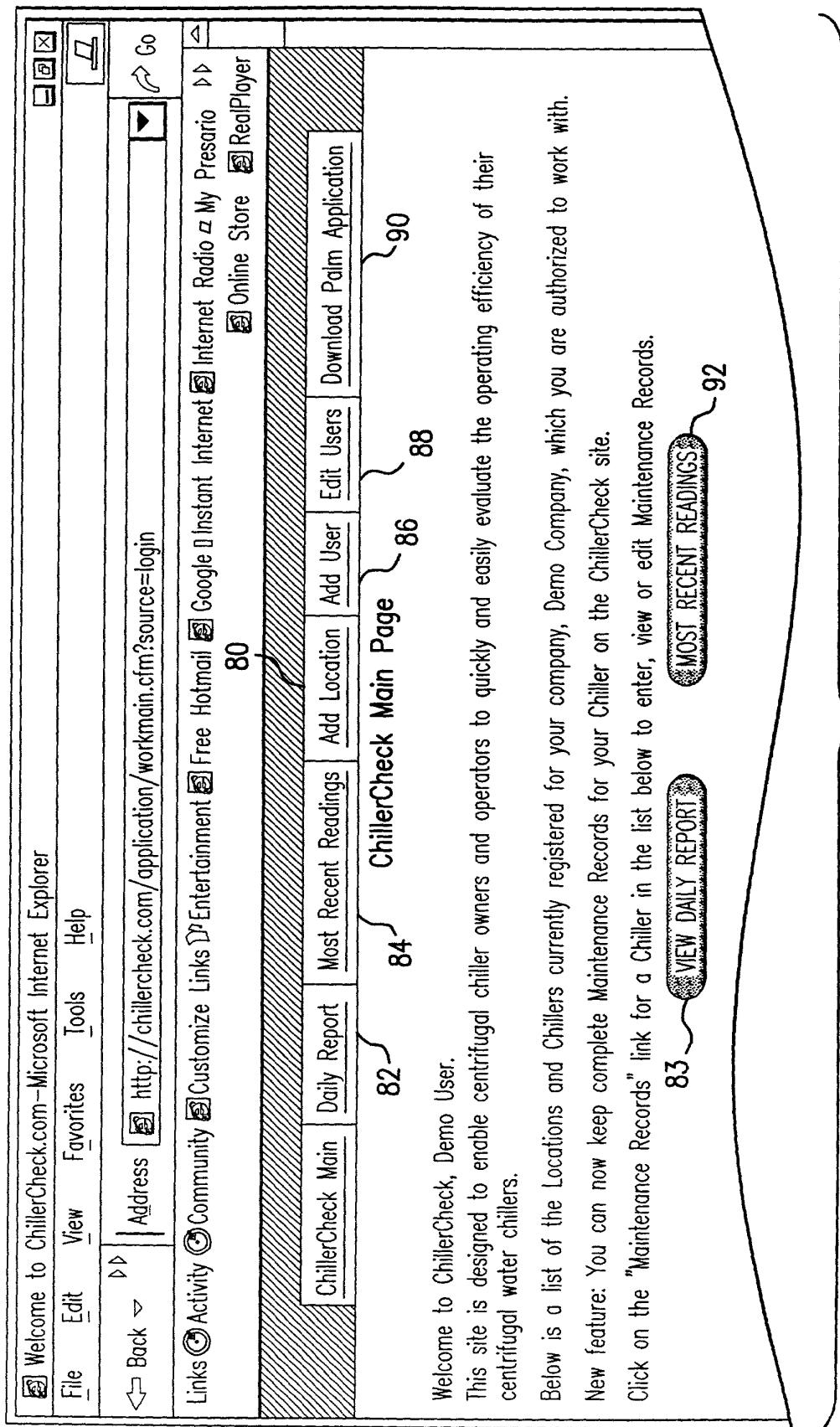


FIG. 4



CONT'D ON FIG.5-1

CONT'D FROM FIG.5-1

Please click on the appropriate link to work with the information below.
 If a red * appears next to the Chiller #, some necessary information has not yet been set up for the chiller. Click on the "Alert" link to see details.

160	162	94	167	156	152	158
Admin Bldg	Add Chiller to this Location	Edit Location Information	Delete this Location			
Chiller #: 2	View Logsheet	Log Records	Maintenance Records	Edit Chiller Information	Delete this Chiller	154
Central Plant		Add Chiller to this Location		Edit Location Information		
Chiller #: 1	View Logsheet	Log Records	Maintenance Records	Edit Chiller Information	Delete this Chiller	158
Chiller #: 2	View Logsheet	Log Records	Maintenance Records	Edit Chiller Information	Delete this Chiller	
160	162	167	152	154	154	Internet

FIG. 5-1

CHILLERCHECK.COM

ChillerCheck Main	Daily Report	Most Recent Readings	Add Location	Add User	Edit Users	Download Palm Application
-------------------	--------------	----------------------	--------------	----------	------------	---------------------------

82 84 Add a Chiller at Atlanta Office Bldg. 80 86 88 90 90

Please fill in all information in the form below, then click the "Add Chiller" button.

You will then be taken back to the ChillerCheck Main page, where you can work with any of your Location, Chiller or Chiller Log records.

Note: If you do not have all the information below available at this time, you can still add the Chiller by filling out only the required information (marked with an * below) now. You can come back later and add the rest of the information. However, you will not be able to make efficiency calculations or graph trends until all Chiller information has been recorded.

Chiller Information

<i>Help!</i>	* Chiller #:	<input type="text"/>	96
<i>Help!</i>	* Make:	<input type="text"/> Choose a Make	98
<i>Help!</i>	* Model:	<input type="text"/>	100
<i>Help!</i>	Serial #:	<input type="text"/>	102
<i>Help!</i>	* Refrigerant Type:	<input type="text"/> Choose a refrigerant	104
<i>Help!</i>	Year Chiller Was Manufactured:	<input type="text"/> Choose a year of manufacture	106
<i>Help!</i>	* Efficiency Rating (kw/ton):	<input type="text"/>	108
<i>Help!</i>	* Energy Cost (\$/kw hour):	<input type="text"/>	110

FIG. 6A

<i>Help!</i>	* Weekly Hrs. of Operation:	<input type="text"/> 112
<i>Help!</i>	* Weeks Per Year of Operation:	<input type="text"/> 114
<i>Help!</i>	* Average Load Profile:	<input type="text"/> % 116
<i>Help!</i>	* Tons:	<input type="text"/> 118
<i>Help!</i>	* Design Voltage:	<input type="text"/> 120
<i>Help!</i>	* Full-Load Amperage:	<input type="text"/> 122
<i>Now we need some information about the Condenser.</i>		
<i>Help!</i>	Design Condenser Water Pressure Drop: (This value may be omitted if necessary, but your calculations will be more accurate if you have it. If you enter a value, you must choose a unit of measure.)	<input type="text"/> Choose a pressure unit <input type="button" value="▼"/> 124 126
<i>Help!</i>	Please choose a unit of measurement for the Actual Condenser Water Pressure Drop:	<input type="text"/> Choose a pressure unit <input type="button" value="▼"/> 128
<i>Help!</i>	Please choose a unit of measurement for Condenser Pressure:	<input type="text"/> Choose a pressure unit <input type="button" value="▼"/> 130
Design Condenser Approach Temp: (This Value may be omitted if you do not have it.) <input type="text"/> 132		

FIG. 6B

Now we need some information about the Evaporator.

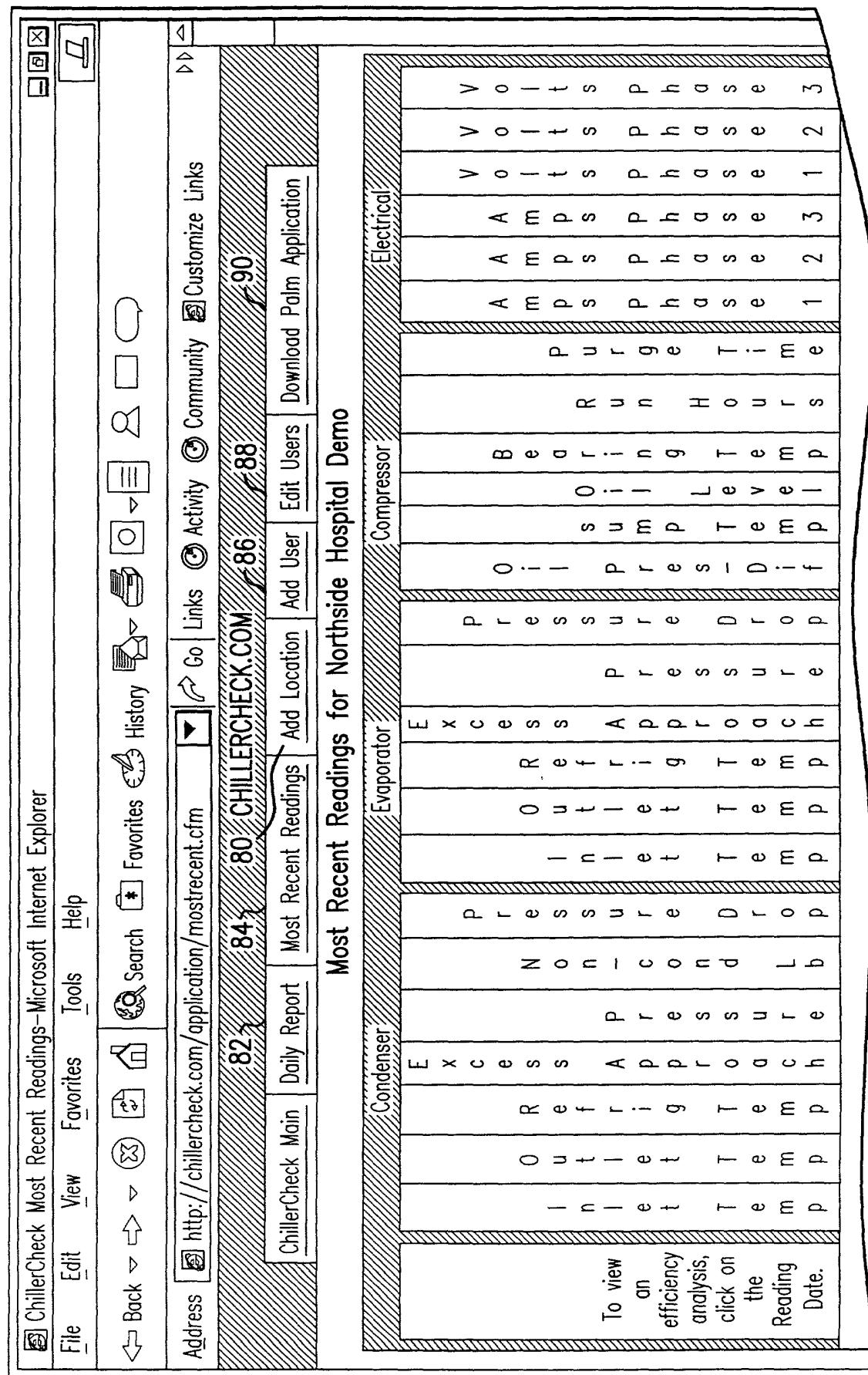
Help! Design Chill Water Pressure Drop: (This value may be omitted if necessary, but your calculations will be more accurate if you have it. If you enter a value, you must choose a unit of measure.)	<input type="text"/> Choose a pressure unit <input type="button" value="▼"/> 134 136
Help! Please choose a unit of measurement for the Actual Chill Water Pressure Drop:	<input type="text"/> Choose a pressure unit <input type="button" value="▼"/> 138
Help! Please choose a unit of measurement for Evaporator Pressure:	<input type="text"/> Choose a pressure unit <input type="button" value="▼"/> 140
Help! Design Evaporator Approach Temp: (This value may be omitted if you do not have it.)	<input type="text"/> 142
Help! Evaporator Design Outlet Water Temp:	<input type="text"/> 144
Please choose a method of calculating Oil Pressure Differential for the Compressor.	
Help! Calculate Differential by:	<input type="text"/> Choose a method <input type="button" value="▼"/> 146

FIG. 6C

There are just a few more things we need to know about this chiller.

Does the chiller have a readout for Purge Run Time?	<input type="radio"/> Yes <input type="radio"/> No 143
If so, is the Purge Run Time measured only in minutes, or in both hours and minutes?	<input type="radio"/> Minutes Only <input type="radio"/> Hours and Minutes 145
Please set a maximum amount of Purge Run Time per day you wish to allow before you are sent an alert.	<input type="text"/> Minutes 147
Does this chiller have a readout for Bearing Temperature?	<input type="radio"/> Yes <input type="radio"/> No 149
Operator Notes: (Enter any notes you might want to record about this chiller.)	<input type="text"/> 150 148
Add Chiller Info	

FIG. 6D



CONT'D ON FIG.7-1

FIG.7

CONT'D ON FIG.7-1

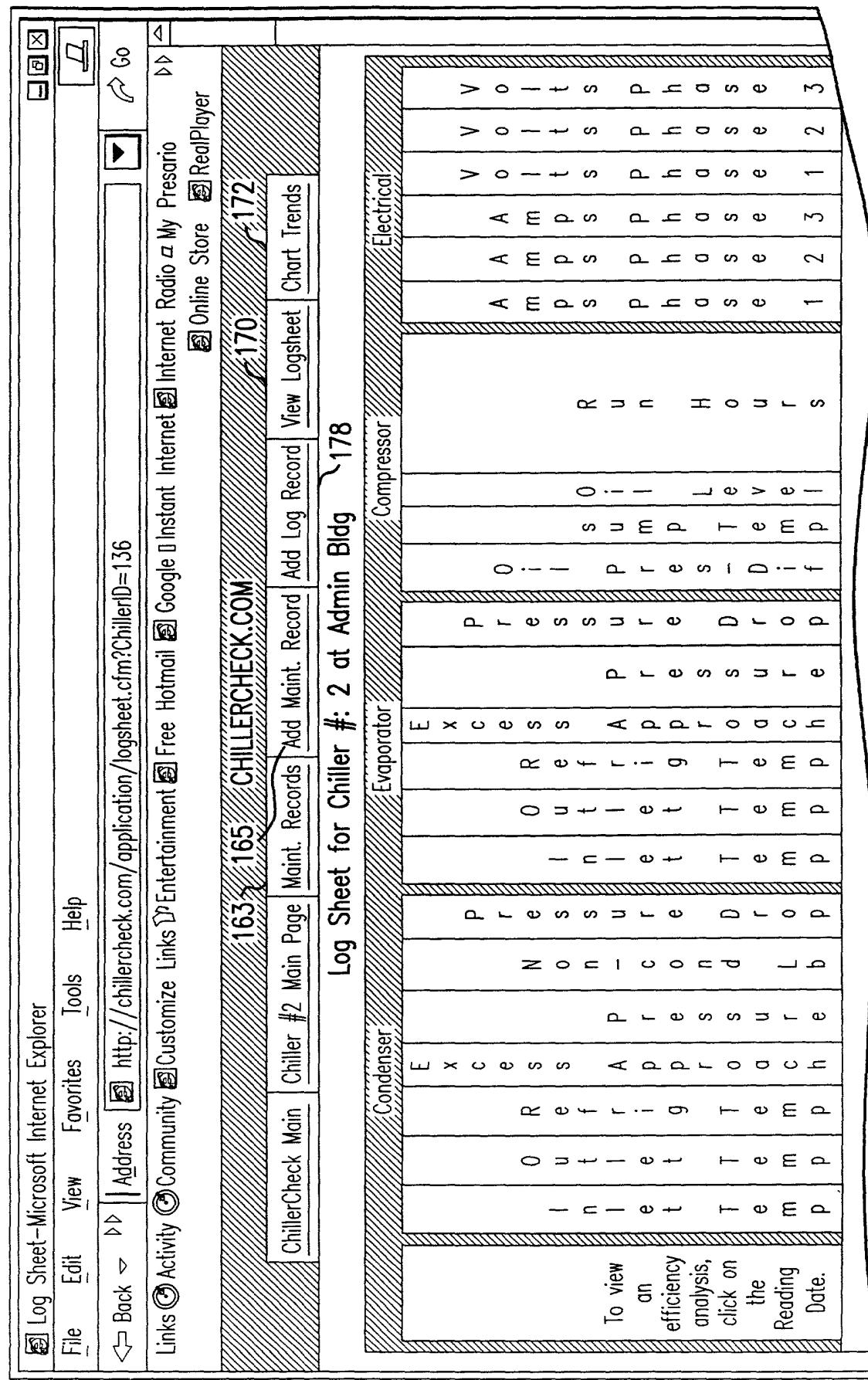
CONT'D FROM FIG.7

CONT'D FROM FIG.7

Location: Main Chiller Plant Chiller #: 1											
8/24/01	TP	74.0	81.0	82.0	0.0	4.0	1.8	10.0	49.0	39.0	38.0
9:08 AM									0.0	-16.0	10.0
Eff. Loss:	10.8%								25.8	140	50
% Load:	57.9%								123	123	620
Location: Main Chiller Plant Chiller #: 2											
8/21/01	TP	78.0	82.0	84.0	0.3	10.0	7.1	50.0	44.0	42.0	0.0
8:00 AM									-12.0	17.9	150
Eff. Loss:	35.6%								50	123	12345
% Load:	87.0%								123	500	500
Location: Main Chiller Plant Chiller #: 3A											
8/21/01	TP	73.7	80.7	81.0	0.0	-0.5	-0.2	47.8	38.0	36.0	0.5
8:00 AM									-8.8	19	139
Eff. Loss:	4.0%								50	124	12345
% Load:	42.4%								123	443	450
<input checked="" type="checkbox"/> Done											
<input type="checkbox"/> Internet											

FIG. 7-1

Inventor: Lawrence J. Seigel
Title: "METHOD AND SYSTEM FOR EVALUATING THE EFFICIENCY
OF AN AIR CONDITIONING APPARATUS"
Serial No.: 10/034,785
Docket No.: 03237.0001U2
Filing Date: December 27, 2001
Contact: Lawrence D. Maxwell, Esq. (404) 688-0770 Sheet 13 of 27



CONT'D ON FIG.8-1

8
E.G.

CONT'D ON FIG. 8-1

Inventor:

Lawrence J Seigel

Title:

“METHOD AND SYSTEM FOR EVALUATING THE EFFICIENCY
OF AN AIR CONDITIONING APPARATUS”

Serial No.:

10/034,785

Docket No.:

03237.0001U2

Filing Date:

December 27, 2001

Contact:

Lawrence D. Maxwell, Esq. (404) 688-0770

Sheet 15 of 27

The screenshot shows a Microsoft Internet Explorer window with the following details:

- Title Bar:** Work with Log Records—Microsoft Internet Explorer
- Menu Bar:** File, Edit, View, Favorites, Tools, Help
- Toolbar:** Back, Forward, Stop, Refresh, Favorites, Search, Print, History, Links, Activity, Community, Customize Links
- Address Bar:** http://chillercheck.com/application/chillermain.cfm?ChillerID=467
- Content Area:**
 - Header: CHILLERCHECK.COM
 - Table: Work with Log Records for Chiller #: 1 at Main Chiller Plant.
 - Rows: 172, 170, 178
 - Text: Below is a list of Log Records for your Chiller #: 1.
 - Text: You may use choices below to work with the records, which are identified by their Reading Date.
 - Table: Log Records (Reading Date: August 24, 2001 9:08 AM to August 17, 2001 8:00 AM)
 - Rows: 164, 166, 168
 - Each row has a "Delete this Log Record" link.
- Bottom Right:** Internet icon

FIG. 9

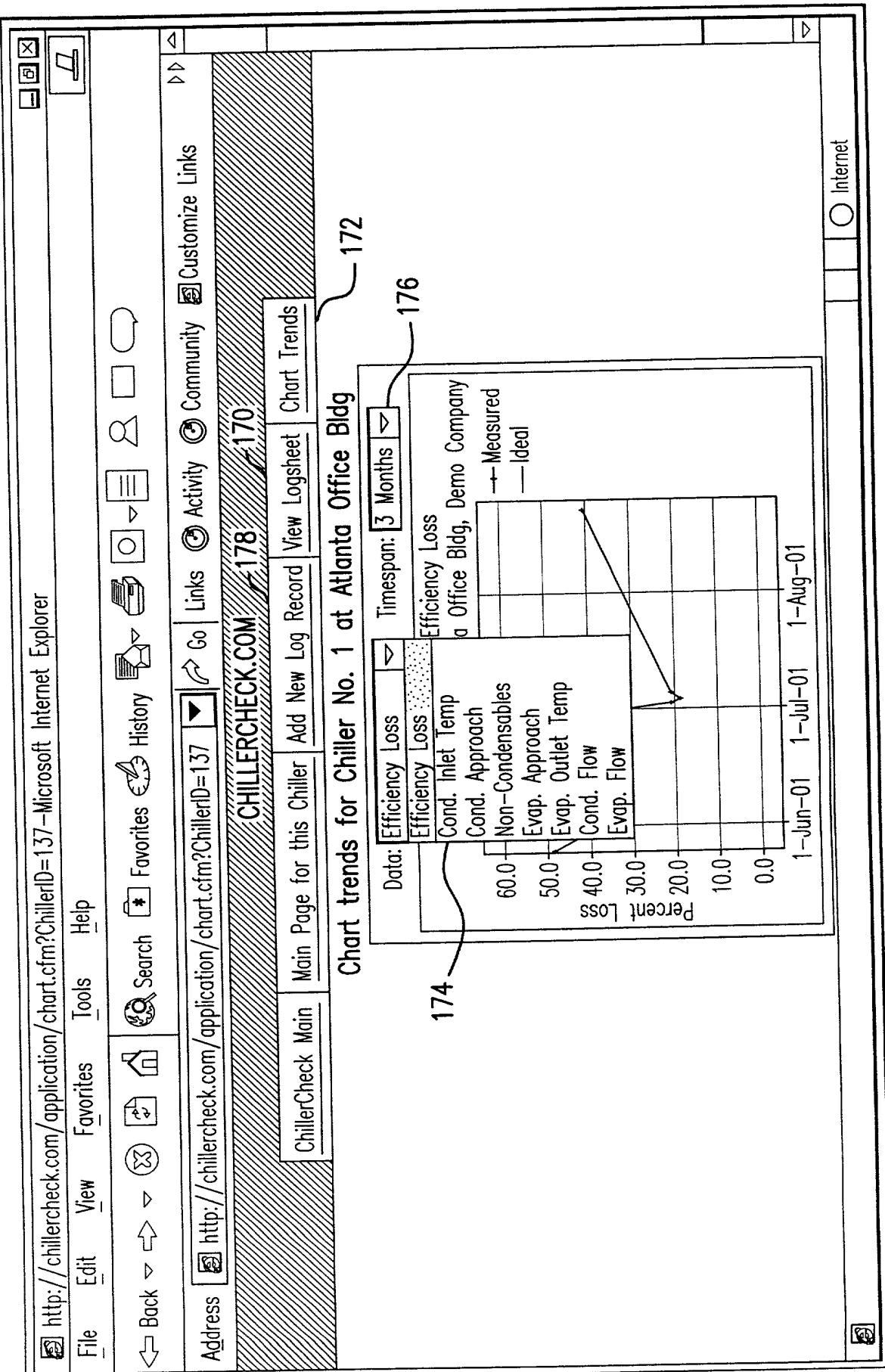


FIG. 10

Inventor: Lawrence J. Seigel
Title: "METHOD AND SYSTEM FOR EVALUATING THE EFFICIENCY OF AN AIR CONDITIONING APPARATUS"
Serial No.: 10/034,785
Docket No.: 03237.0001U2
Filing Date: December 27, 2001
Contact: Lawrence D. Maxwell, Esq. (404) 688-0770

Sheet 17 of 27

CHILLERCHECK.COM 170 172

ChillerCheck Main	Main Page for this Chiller	Add New Log Record	View Logsheet	Chart Trends
-------------------	----------------------------	--------------------	---------------	--------------

Add a Log Record for Chiller #: 1 at Main Chiller Plant.
178

Please enter your readings into the form below, then click the "Add Record" button:

Log Record

Operator:	Tim
Reading Date:	August 24, 2001
Reading Time:	9:32 AM

Condenser Readings

Inlet Water Temp:	184
Outlet Water Temp:	186
Refrigerant Temp:	188
Condenser Pressure:	PSIG 190
Actual Condenser Water Pressure Drop:	PSIG 192

Evaporator Readings

Inlet Water Temp:	194
Outlet Water Temp:	196
Refrigerant Temp:	198
Evaporator Pressure:	In. Hg. 200
Actual Chill Water Pressure Drop:	PSIG 202

FIG. 11A

Inventor: Lawrence J. Seigel
Title: "METHOD AND SYSTEM FOR EVALUATING THE EFFICIENCY
OF AN AIR CONDITIONING APPARATUS"
Serial No.: 10/034,785
Docket No.: 03237.00001U2
Filing Date: December 27, 2001
Contact: Lawrence D. Maxwell, Esq. (404) 688-0770

Sheet 18 of 27

<i>Compressor Readings</i>	
Oil Pressure (High):	lb. 204
Oil Sump Temp:	°F 206
Oil Level:	% 208
Bearing Temp:	°F 210
Run Hours:	212
Purge Pumpout Time:	214
<i>Electrical Readings</i>	
Amps Phase 1:	216
Amps Phase 2:	218
Amps Phase 3:	220
Volts Phase 1:	222
Volts Phase 2:	224
Volts Phase 3:	226
<i>Operator Notes</i>	
228	
Add Log Record 230	

FIG. 11B

CHILLERCHECK.COM

[ChillerCheck Main](#) [Chiller #1 Main Page](#) [Maint. Records](#) [Add Maint. Record](#) [Add Log Record](#) [View Logsheet](#) [Chart Trends](#)

Efficiency Calculation for Chiller #1 at Admin Bldg. 170 { 170 { 170 { 172

Reading taken on October 10, 2001 at 1:50 PM

Results	163	165	167	169	171	173	175	177	179	181	183	185	187	189	191	193	195	197	199	201	203	205	207	209	211	213	215	217	219	221	223	225	227	229	231	233	235	237	239	241	243	245	247	249	251	253	255	257	259	261	263	265	267	269	271	273	275	277	279	281	283	285	287	289	291	293	295	297	299	301	303	305	307	309	311	313	315	317	319	321	323	325	327	329	331	333	335	337	339	341	343	345	347	349	351	353	355	357	359	361	363	365	367	369	371	373	375	377	379	381	383	385	387	389	391	393	395	397	399	401	403	405	407	409	411	413	415	417	419	421	423	425	427	429	431	433	435	437	439	441	443	445	447	449	451	453	455	457	459	461	463	465	467	469	471	473	475	477	479	481	483	485	487	489	491	493	495	497	499	501	503	505	507	509	511	513	515	517	519	521	523	525	527	529	531	533	535	537	539	541	543	545	547	549	551	553	555	557	559	561	563	565	567	569	571	573	575	577	579	581	583	585	587	589	591	593	595	597	599	601	603	605	607	609	611	613	615	617	619	621	623	625	627	629	631	633	635	637	639	641	643	645	647	649	651	653	655	657	659	661	663	665	667	669	671	673	675	677	679	681	683	685	687	689	691	693	695	697	699	701	703	705	707	709	711	713	715	717	719	721	723	725	727	729	731	733	735	737	739	741	743	745	747	749	751	753	755	757	759	761	763	765	767	769	771	773	775	777	779	781	783	785	787	789	791	793	795	797	799	801	803	805	807	809	811	813	815	817	819	821	823	825	827	829	831	833	835	837	839	841	843	845	847	849	851	853	855	857	859	861	863	865	867	869	871	873	875	877	879	881	883	885	887	889	891	893	895	897	899	901	903	905	907	909	911	913	915	917	919	921	923	925	927	929	931	933	935	937	939	941	943	945	947	949	951	953	955	957	959	961	963	965	967	969	971	973	975	977	979	981	983	985	987	989	991	993	995	997	999	1001	1003	1005	1007	1009	1011	1013	1015	1017	1019	1021	1023	1025	1027	1029	1031	1033	1035	1037	1039	1041	1043	1045	1047	1049	1051	1053	1055	1057	1059	1061	1063	1065	1067	1069	1071	1073	1075	1077	1079	1081	1083	1085	1087	1089	1091	1093	1095	1097	1099	1101	1103	1105	1107	1109	1111	1113	1115	1117	1119	1121	1123	1125	1127	1129	1131	1133	1135	1137	1139	1141	1143	1145	1147	1149	1151	1153	1155	1157	1159	1161	1163	1165	1167	1169	1171	1173	1175	1177	1179	1181	1183	1185	1187	1189	1191	1193	1195	1197	1199	1201	1203	1205	1207	1209	1211	1213	1215	1217	1219	1221	1223	1225	1227	1229	1231	1233	1235	1237	1239	1241	1243	1245	1247	1249	1251	1253	1255	1257	1259	1261	1263	1265	1267	1269	1271	1273	1275	1277	1279	1281	1283	1285	1287	1289	1291	1293	1295	1297	1299	1301	1303	1305	1307	1309	1311	1313	1315	1317	1319	1321	1323	1325	1327	1329	1331	1333	1335	1337	1339	1341	1343	1345	1347	1349	1351	1353	1355	1357	1359	1361	1363	1365	1367	1369	1371	1373	1375	1377	1379	1381	1383	1385	1387	1389	1391	1393	1395	1397	1399	1401	1403	1405	1407	1409	1411	1413	1415	1417	1419	1421	1423	1425	1427	1429	1431	1433	1435	1437	1439	1441	1443	1445	1447	1449	1451	1453	1455	1457	1459	1461	1463	1465	1467	1469	1471	1473	1475	1477	1479	1481	1483	1485	1487	1489	1491	1493	1495	1497	1499	1501	1503	1505	1507	1509	1511	1513	1515	1517	1519	1521	1523	1525	1527	1529	1531	1533	1535	1537	1539	1541	1543	1545	1547	1549	1551	1553	1555	1557	1559	1561	1563	1565	1567	1569	1571	1573	1575	1577	1579	1581	1583	1585	1587	1589	1591	1593	1595	1597	1599	1601	1603	1605	1607	1609	1611	1613	1615	1617	1619	1621	1623	1625	1627	1629	1631	1633	1635	1637	1639	1641	1643	1645	1647	1649	1651	1653	1655	1657	1659	1661	1663	1665
---------	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------

Inventor: Lawrence J. Seigel
Title: "METHOD AND SYSTEM FOR EVALUATING THE EFFICIENCY
OF AN AIR CONDITIONING APPARATUS"
Serial No.: 10/034,785
Docket No.: 03237.0001U2
Filing Date: December 27, 2001
Contact: Lawrence D. Maxwell, Esq. (404) 688-0770 Sheet 20 of 27

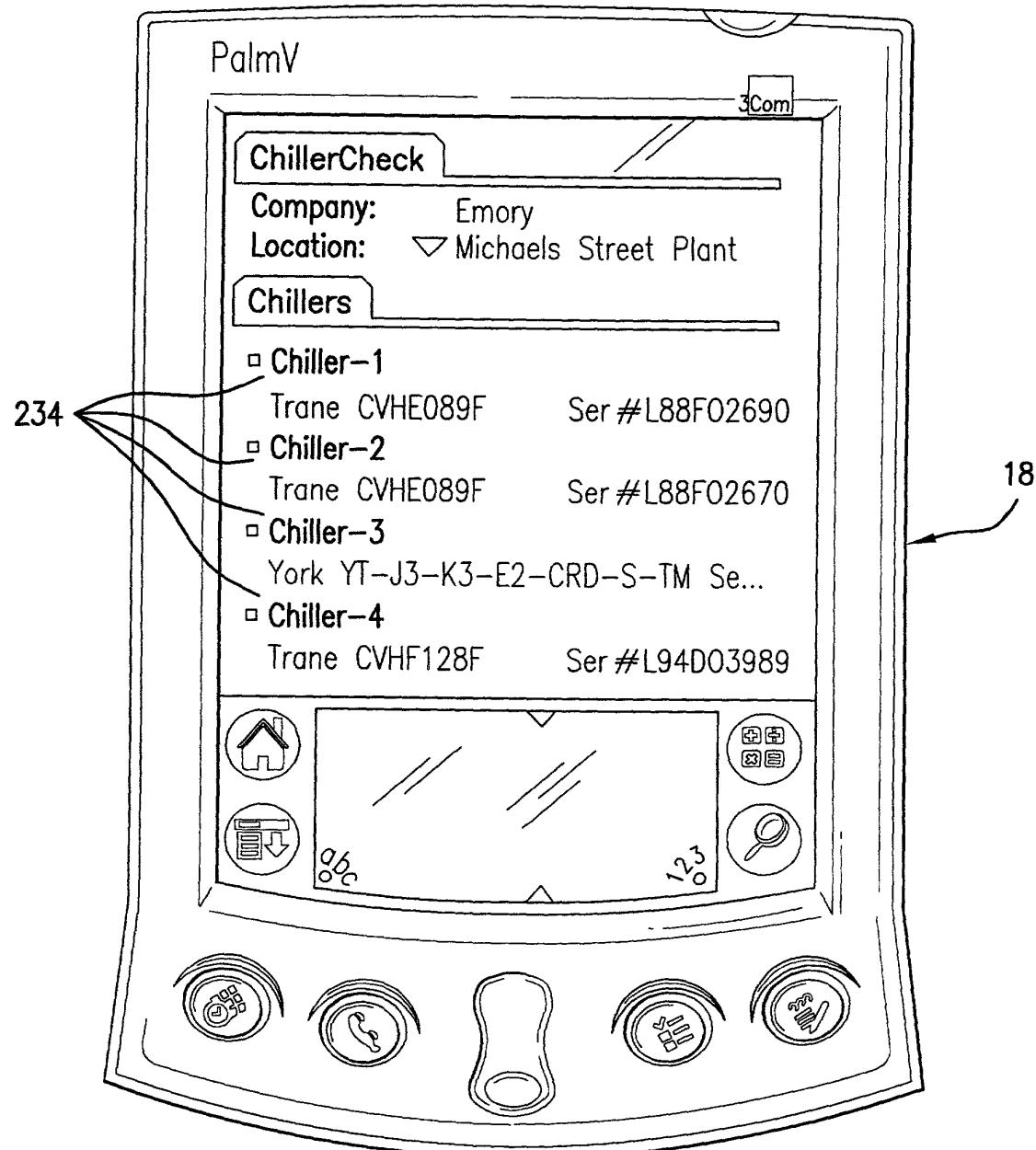


FIG.13

Inventor: Lawrence J. Seigel
Title: "METHOD AND SYSTEM FOR EVALUATING THE EFFICIENCY
OF AN AIR CONDITIONING APPARATUS"
Serial No.: 10/034,785
Docket No.: 03237 0001U2
Filing Date: December 27, 2001
Contact: Lawrence D. Maxwell, Esq. (404) 688-0770

Sheet 21 of 27

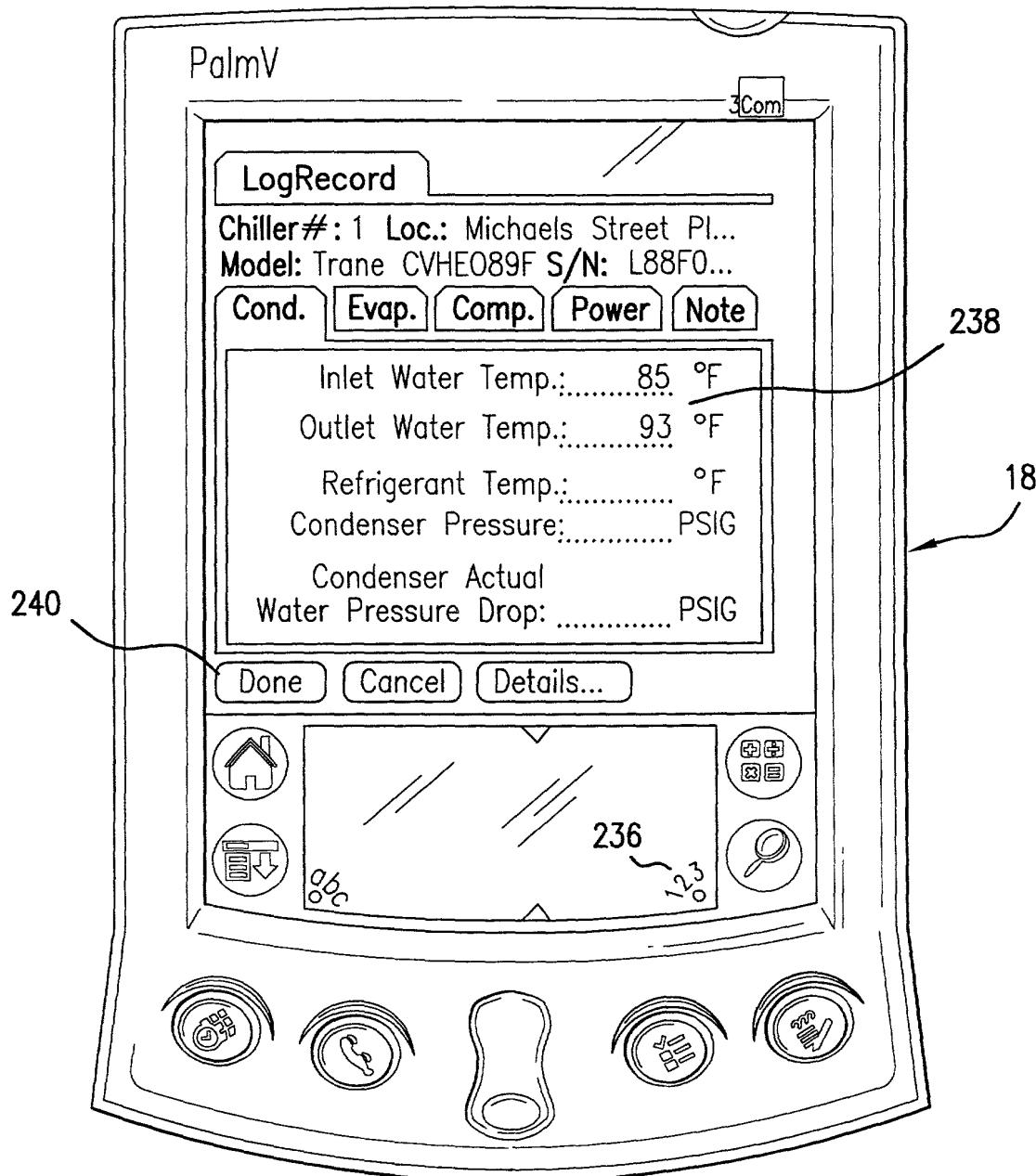


FIG.14

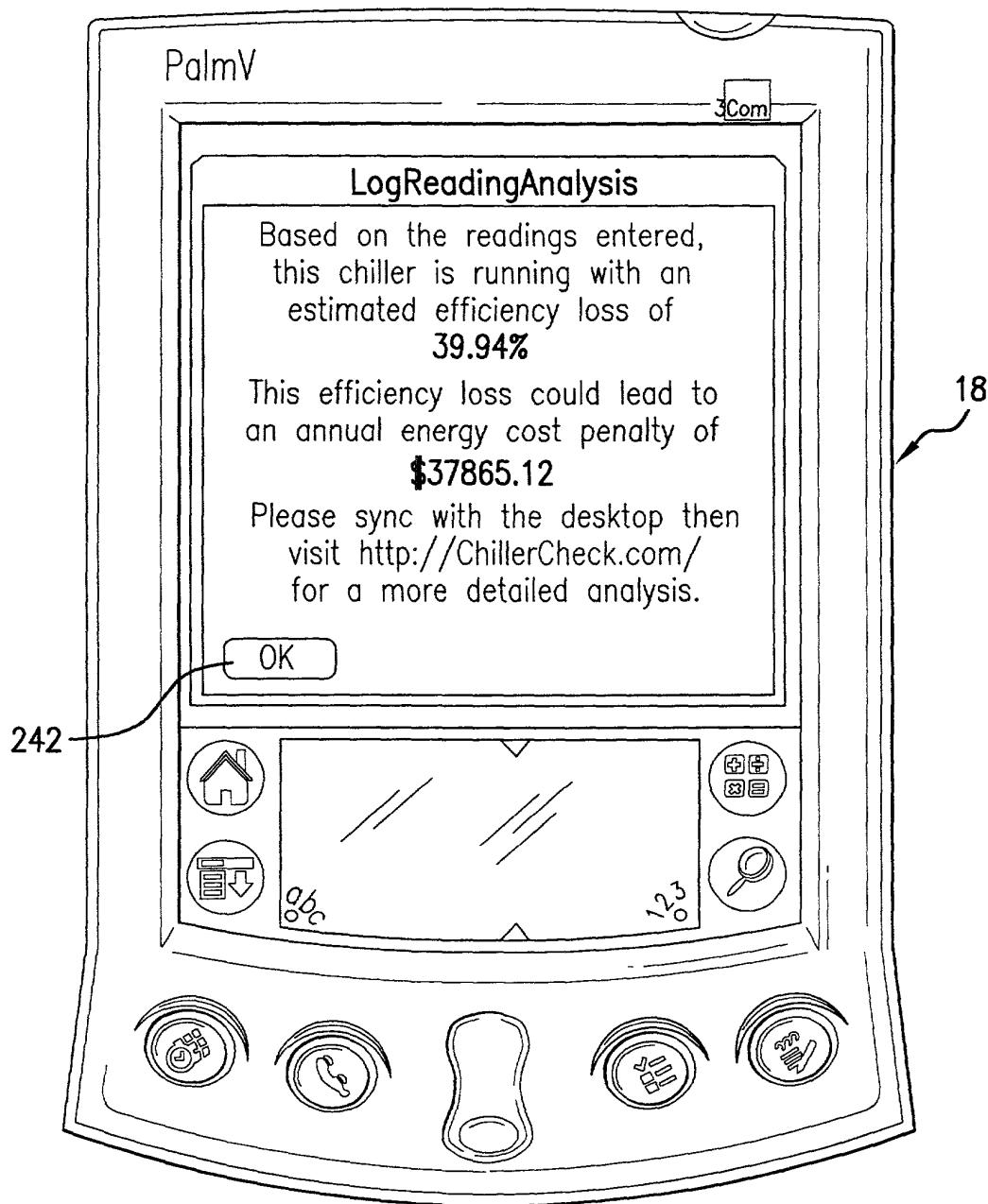


FIG.15

CHILLERCHECK.COM

178 170 172

1

ChillerCheck	Main	Chiller #1	Main Page	Maint. Records	Add Maint. Record	Add Log Record	View Logsheet	Chart Trends
--------------	------	------------	-----------	----------------	-------------------	----------------	---------------	--------------

Add Maintenance Record for Chiller #1 at Admin Bldg.

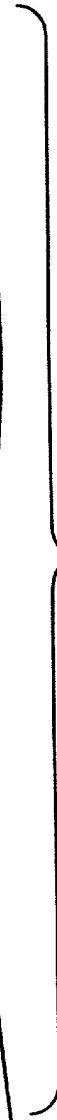
163 165

Please fill in all information in the form below, then click the "Add Maintenance Record" button.

You will then be taken back to the Maintenance page for this chiller.

Maintenance Information

Annual Maintenance Date:	Select a Month	Day	Year
Oil Maintenance			
Oil Change Date:	Select a Month	Day	Year
Date Oil Added:	Select a Month	Day	Year
Quantity of Oil Added (Gallons):	[Empty Box]		
Oil Analysis Date:	Select a Month	Day	Year



CONT'D ON FIG. 16A-1

FIG. 16A

Inventor: Lawrence J. Seigel
Title: "METHOD AND SYSTEM FOR EVALUATING THE EFFICIENCY
OF AN AIR CONDITIONING APPARATUS"
Serial No.: 10/034,785
Docket No.: 03237.0001U2
Filing Date: December 27, 2001
Contact: Lawrence D. Maxwell, Esq. (404) 688-0770

Sheet 24 of 27

CONT'D FROM FIG.16A

Eddy Current Tests			
Eddy Current Test Date (Condenser):	Select a Month	Day	Year
Eddy Current Test Date (Evaporator):	Select a Month	Day	Year
Major Stop Inspection (compressor teardown)			
Major Stop Inspection:	Select a Month	Day	Year
Refrigerant Maintenance			
Refrigerant Analysis Date:	Select a Month	Day	Year
Date Refrigerant Added:	Select a Month	Day	Year
Quantity of Refrigerant Added: (Pounds):			
Tube Cleaning			
Condenser Tube Cleaning Date:	Select a Month	Day	Year
Evaporator Tube Cleaning Date:	Select a Month	Day	Year
Purge Maintenance			
Purge Tank Reclaim Date:	Select a Month	Day	Year
Purge Run Time Reading When Tank Reclaimed:			

CONT'D ON FIG.16B

FIG. 16A-1

Inventor: Lawrence J. Seigel
Title: "METHOD AND SYSTEM FOR EVALUATING THE EFFICIENCY
OF AN AIR CONDITIONING APPARATUS"
Serial No.: 10/034,785
Docket No.: 03237.0001U2
Filing Date: December 27, 2001
Contact: Lawrence D. Maxwell, Esq. (404) 688-0770

Sheet 25 of 27

CONT'D FROM FIG.16A-1

100-24785-002-001

Purge Filter Dryer Change Date:	<input type="button" value="Select a Month"/> <input type="button" value="Day"/> <input type="button" value="Year"/>
Major Repairs	
Major Repair Date:	<input type="button" value="Select a Month"/> <input type="button" value="Day"/> <input type="button" value="Year"/>
Major Repair Description:	<input type="text"/>
Notes	
Maintenance Notes: (You may enter a note about any type of maintenance):	<input type="text"/>
<input type="button" value="Add Maintenance Record"/>	

FIG. 16B

CHILLERCHECK.COM

178 170 172

ChillerCheck	Main	Chiller #1	Main Page	Maint. Records	Add Maint. Record	Add Log Record	View Logsheet	Chart Trends
--------------	------	------------	-----------	----------------	-------------------	----------------	-------------------------------	--------------

Maintenance { Records for Chiller #: 1 at Admin Bldg.
163 165

Below is a list of the most recent Maintenance Operations for your Chiller #1. You may click on the name of a Maintenance Type to view all records of that type.

Maintenance Type	Most Recent Maintenance
Annual Maintenance:	October 18, 2001
Oil Maintenance	
Oil Change:	October 18, 2001
Oil Analysis:	October 1, 2001
Eddy Current Tests	
Condenser Eddy Current:	September 9, 2001
Evaporator Eddy Current:	September 10, 2001
Major Stop Inspection (compressor teardown)	
Major Stop:	January 3, 2000

CON'TD ON FIG.17-1

FIG. 17

CONT'D FROM FIG.17

Refrigerant Maintenance	
<u>Refrigerant Analysis:</u>	January 3, 2000
<u>Refrigerant Added:</u>	August 23, 2001 – Quantity: 100 Pounds
Tube Cleaning	
<u>Condenser Tube Cleaning:</u>	October 19, 2001
<u>Evaporator Tube Cleaning:</u>	February 5, 2000
Purge Maintenance	
<u>Purge Tank Reclaim:</u>	February 7, 2001 – Purge Run Time at Change: 1212123
Major Repairs	
<u>Major Repair:</u>	April 4, 2000 Repair Description: motor burnout
Maintenance Notes	
<u>Notes:</u>	November 5, 2001 Note: starter problems resulted in burnout

FIG. 17-1